



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/583,208

06/16/2006

Johan Stenberg

821-93

7720

28249 7590 04/18/2008

DILWORTH & BARRESE, LLP  
333 EARLE OVINGTON BLVD.  
SUITE 702  
UNIONDALE, NY 11553

EXAMINER

TANINGCO, MARCUS H

ART UNIT

PAPER NUMBER

2884

MAIL DATE

DELIVERY MODE

04/18/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/583,208	<b>Applicant(s)</b> STENBERG, JOHAN	
	<b>Examiner</b> MARCUS H. TANINGCO	<b>Art Unit</b> 2884	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1,2,4-11,13-17 and 19-22 is/are rejected.
- 7) ☒ Claim(s) 3,12 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/16/06</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### **Claim Rejections - 35 USC § 112**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 19-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 19-22 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. **Note:** A single claim which claims both an apparatus and the process of using said apparatus the apparatus is indefinite under 35 U.S.C. 112, second paragraph. Ex parte Lyell, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990).

### **Claim Rejections - 35 USC § 101**

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 19-22 are rejected under 35 U.S.C. 101 because the claims are directed to neither a "process" nor a "machine," but rather embraces or overlaps two different statutory classes of invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only. Id. at 1551.

### **Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 6, 7, and 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Wong (US 5,060,508).

With regards to claims 1 and 2, Wong discloses a gas sample chamber (Figs. 1-5) comprising: a passage (20) (*gas cell*) to permit passage of a sample gas; a radiation source (12); a detector (26); openings (30) for permitting a sample gas to diffuse into and out of passage (20); and a circuit board, which comprises said detector for measuring the intensity of detected radiation, having circuitry (16) to provide power for said radiation source.

With regards to claim 4, Wong discloses said passage comprises walls of highly reflective material for transmitting radiation (Abstract).

With regards to claim 6, Wong discloses said radiation source and said detector are mounted on the circuit board (Fig. 1).

With regards to claim 7, Wong discloses an infrared light source and optical detector (column 2, lines 18-37).

With regards to claim 9, Wong discloses said passage (20) extends across said circuit board (Fig. 1).

With regards to claim 10, Wong discloses said passage is fully embedded in the substrate of the circuit board (Fig. 1).

With regards to claim 11, Wong discloses said passage extends along a surface of the circuit board (Fig. 1).

### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 15-17, and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong.

With regards to claim 5, Wong discloses said passage comprises walls of highly reflective material for transmitting radiation (Abstract), but fails to disclose the type of reflective material. Nevertheless, those skilled in the art appreciate that, absent some degree of criticality, providing a gold or silver reflective coating would have been a matter of routine design choice that would have been within the skill of a person of ordinary skill in the art depending on the needs of the particular application.

With regards to claim 15, Wong discloses said circuit board is made of plastic (Abstract), but fails to teach said board is flexible. However, those skilled in the art appreciate that, absent some degree of criticality, using flexible plastic would have been a matter of routine design choice that would have been within the skill of a person of ordinary skill in the art depending on the needs of the particular application.

With regards to claim 16, the method recited in claim 15 is suggested by the apparatus of

Art Unit: 2884

claim 1 and is rejected accordingly. Although Wong fails to specifically teach said inner walls comprise a smooth surface, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Wong with smooth inner walls in order to ensure proper transmission of light.

With regards to claim 17, Wong discloses said passage comprises walls of highly reflective material for transmitting radiation (Abstract), but fails to disclose the type of reflective material. Nevertheless, those skilled in the art appreciate that, absent some degree of criticality, providing a metallic reflective coating would have been a matter of routine design choice that would have been within the skill of a person of ordinary skill in the art depending on the needs of the particular application.

With regards to claim 19, Wong discloses determining the concentration of carbon dioxide (column 2, lines 18-21).

With regards to claims 20 and 21, Wong discloses determining the concentration of carbon dioxide (column 2, lines 18-21). With regards to the source of the sample gas, those skilled in the art appreciate that, absent some degree of criticality, the particular use of said apparatus would have been a matter of routine design choice that would have been within the skill of a person of ordinary skill in the art depending on the needs of the particular application.

With regards to claim 22, Wong fails to teach determining the composition of said sample gas. However, those skilled in the art appreciate that, absent some degree of criticality, determining the concentration or composition of a sample gas would have been a matter of routine design choice that would have been within the skill of a person of ordinary skill in the art depending on the needs of the particular application.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wong in view of Wong (US 5,834,777).

With regards to claim 8, Wong fails to teach a heat generating element. Wong ('777), however, teaches a NDIR gas sensor comprising a heating element (86) to prevent moisture from condensing in the inner walls of the sample chamber (34). As such, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Wong with a heating element in order to prevent condensation.

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong in view of Tice et al. (*Tice*, US 2005/0017206).

With regards to claims 13 and 14, Wong discloses the claimed invention, but fails to teach a plurality of cells or that said plurality of cells comprises at least one test channel. Tice teaches a chamber for gas detection comprising a plurality of chambers (30a, 30b) wherein said chambers comprise a reference chamber (30b) to detect light not absorbed by the sample gas [0024]. It would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Wong with the configuration taught by Tice in order to compensate for environmental conditions.

#### **Allowable Subject Matter**

Claims 3, 12, and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

With regards to claim 3, prior art fails to teach a liquid sensor.

With regards to claims 12 and 18, prior art fails to teach said fluid cell is built up of a plurality of circuit boards.

### **Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus H. Taningco whose telephone number is (571) 272-1848. The examiner can normally be reached on M - F 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/Constantine Hannaher/  
Primary Examiner, Art Unit 2884**

**/Marcus H Taningco/  
Examiner, Art Unit 2884**